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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,276	04/05/2001	Garth S. Jones	00-721-US	6338

7590

09/22/2003

Frederick H. Colen  
Reed Smith LLP  
P.O. Box 488  
Pittsburgh, PA 15230-0488

EXAMINER

KHARE, DEVESH

ART UNIT

PAPER NUMBER

1623

DATE MAILED: 09/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicant(s)

09/828,276

JONES ET AL.

Examiner

Devesh Khare

Art Unit

1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4,6-10 and 17-30 is/are pending in the application.
- 4a) Of the above claim(s) 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,6-10 and 21-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

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Applicant's Amendment and remarks filed on 6/5/03 on paper no. 14 is acknowledged. Claims 1,4,6,7,8,10 and the abstract have been amended. Claims 2,3,5 and 11-16 have been cancelled. Claims 17-20 have been withdrawn. New claims 21-30 have been added. Claims 1,4,6-10 and 21-30 are currently pending in this application. The rejection of claims 1-4 and 11-16 under 35 U.S.C. 102(e) as being anticipated by Myers et al. (U.S. Patent 6,376,472) has been overcome through applicants' amendment to the claims.

The Examiner's indication of allowable subject matter of claim 10 in Paper No. 11, is vacated because during the course of reconsideration of the application, a prior art reference not previously disclosed by the applicants or the examiner came to light (see rejection below).

### **35 U.S.C. 103(a) rejection**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

Claims 1,4,6-10 and 21-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Myers et al. (U.S. Patent 6,376,472) in view of Olsson et al. (U.S. Patent RE37,045 E).

Claims 1,4,6-10 and 21-30 are drawn toward an adenosine 2',3'-O-isopropylidene analogue, wherein R<sub>1</sub> and R<sub>2</sub> are each an amine group or an alkylamine group; R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are each a hydrogen or a halogen; and R<sub>6</sub> is an alkyl alcohol group or a carboxamido group, its pharmaceutical compositions and specifically the adenosine-5'-

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carboxamide derivatives, of claims 9 and 29, wherein  $R_6$  is a N-alkylcarboxamido group.

Myers et al. teach a compound of the formula where the ribose ring of the adenosine is 2',3'-O-isopropylidene derivative (see claim 1). See column 7, lines 52-63, wherein formula I shows an adenosine nucleoside compound; wherein variables A and B are OR' and OR'' and together these variables represent the structure in column 8, lines 41-44 and the R' and R'' variables may be hydrogen or alkyl, column 8, lines 46-50; wherein the variable T is the alkyl alcohol group  $R_3O-CH_2$  set forth in column 8, line 25; wherein  $R_6$  is hydrogen and X-Y of the prior art is seen to be a nitrogen containing ring. Pharmaceutical compositions of the invention as claimed are rendered obvious by the disclosure in column 45, lines 26-42; wherein adenosine analogues as disclosed may be formulated into pharmaceutical compositions. While the Myers et al's. 2',3'-O-isopropylidene derivatives of adenosine are closely analogous to the applicant's compounds, Myers et al's. compounds differ from applicant's claimed compounds in that there is no disclosure of adenosine-5'-carboxamide derivatives. It is noted that Myers et al do not provide specific disclosures regarding the substitution of an isopropylidene ring with an amine group or an alkyl amine group.

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Olsson et al. teach the 5'- carboxamido derivatives of 2',3'-O-isopropylidene -adenosine (abstract). Olsson et al. disclose the derivatives of 5'-carboxamidoadenosine compounds of General Formula 8, wherein the substituents of carboxamide group are lower alkyl, hydroxyl, lower alkoxy or halogen substituted straight chain lower alkyl (col. 7, lines 8-15).

Therefore, one of ordinary skill in the art would have found the applicants claimed 5'-carboxamido derivatives of 2',3'-O-isopropylidene –adenosine(N-substituted) derivatives and its pharmaceutical composition to have been obvious at the time the invention was made having the above cited references before him. Since Myers et al. disclose the adenosine-5'-(N-substituted) derivatives and Olsson et al. disclose the 5'- carboxamido derivatives of 2',3'-O-isopropylidene -adenosine, one skilled in the art would have a reasonable expectation for success in combining both references to obtain the adenosine-5'-carboxamide compounds, wherein the carbohydrate group is substituted with an isopropylidene ring, its pharmaceutical compositions and specifically the compounds of claims 9 and 29. The motivation for doing so is provided by Myers et al., which suggests the use of Adenosine-5'-(N-substituted)carboxamides and carboxylate esters and N1-oxides thereof for their coronary vasodilating activities (col. 7, lines 1-3).

Any inquiry concerning this communication or earlier communications from the

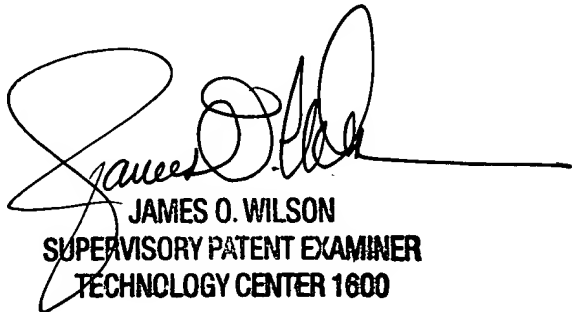
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Examiner should be directed to Devesh Khare whose telephone number is (703)605-

1199. The examiner can normally be reached on Monday to Friday from 8:00 to 4:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson, Supervisory Patent Examiner, Art Unit 1623 can be reached at 703-308-4624. The official fax phone numbers for the organization where this application or proceeding is assigned is (703) 308-4556 or 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

Devesh Khare, Ph.D.,JD(3Y).  
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September 11,2003



**JAMES O. WILSON**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 1600**